

Cowl Latch Pin Spacers: Protecting Your Latch Components

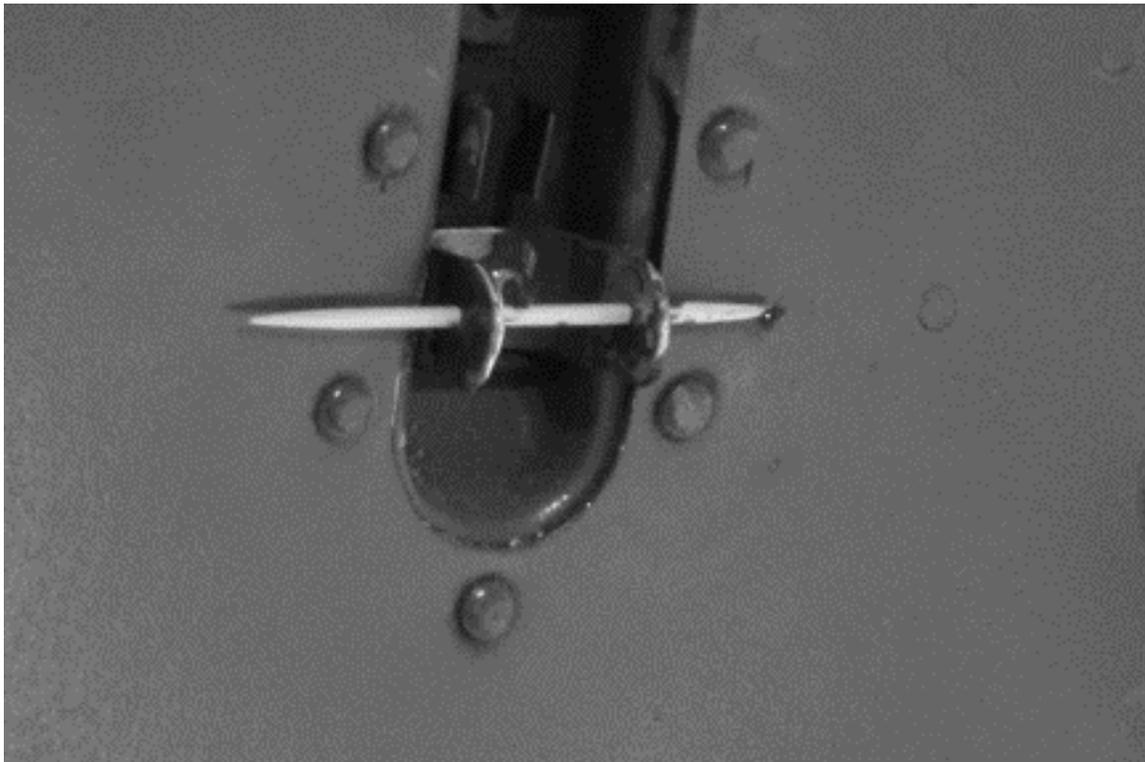
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Credit for the following info goes to a pair of Birddog operators. Fred Mooney installed the first latch pin spacers I'd seen. Steve Frushour found the spacers that led to the final version that makes this an easy fix. Both have used the JB Weld hole repair method.

If you've ever replaced the U-shaped piece of your cowl's lower latch assembly, officially called the Retainer (p/n 0652070), you know the job is a pain. And it can become a reoccurring pain... The hard stainless pins work in their holes in the aluminum retainers and as they open up those holes, the wear accelerates from vibration of the pins in the ever-enlarging holes.

Fill Worn Retainer Holes

Rather than replace the retainers, simply clean them up with sandpaper (non-oxide coated to prevent corrosion), wipe with acetone, and apply JB Weld to fill the oversize holes. A round toothpick that's been coated with a thin film of grease can be inserted to form what will become the pin's holes. Be sure the toothpick is as close as possible to the cowl (inboard) side of the retainer. When the pins enlarge the holes, the holes grow toward the outboard side. The toothpick can later be cut off with a razor blade so an awl or the sharpened tip of a pin can be used to clean out the hole.



Prevent Further Wear With A Spacer

Preventing more wear of the retainer's holes is just a matter of keeping the hard stainless steel pin from vibrating in the aluminum retainer's holes. The latch design results in a gap between the lower latch arm and the pin. Pulling the lower latch arm out to the pin to prevent vibration in flight

causes the upper latch to seat improperly on the upper cowl's latch receptacle. That can contribute to cracking of the curved top portion of the latch. So, put a spacer on the pin – one that keeps the latch fully seated and in the correct position. It prevents vibration of the pin, even on the troublesome left side of the cowl where the pins are buffeted by the prop wash.

Fortunately, a stock nylon spacer is the correct width and diameter for our use. The spacer(s) can be purchased at any of the thousands of hardware stores that stock the Hillman Fastener assortments. Those are the nuts, bolts, screws, washers and goofy little pieces stocked in the pull-out cardboard drawers that each have a dozen or so small compartments. In the Hillman line, a drawer labeled "Nylon Spacers" will contain Hillman P/N 58027-L (in the Assortment 58016 drawer). The white nylon spacer is 3/8" dia x 3/4" L with a 0.140 dia center hole.



Shrink Tubing For Rub Resistance

Apply 1/2" dia heat shrink tubing to the nylon spacer. The shrink tubing will protect the latches' paint from abrasion by the hard nylon.

Then, simply install the spacers. They'll help prevent the pins from working the holes in the aluminum retainers, will keep each latch from springing free from its fully-seated position, and will help prevent deformation and cracking of the latch's top section.



The spacer also helps keep the lower arm of the latch snapped on its spring catch. The pin firmly pinches the spacer so the pin does not slide fore and aft, preventing wear on the bottom left and right edges of the retainer – two more benefits. With thanks to Fred and Steve!

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